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Preliminary Ecological Appraisal and Phase 1 Habitat Assessment

Land at Bartons Road, Havant

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Introduction

Wychwood Environmental was commissioned by The Ecology Co-operation Ltd to undertake a Phase II Vegetation Survey on land associated with a proposed housing development on existing arable land located just at Bartons Road, Havant, Hampshire.

A Phase I Survey and desk study was conducted by Paul Whitby in 2014. During this survey areas of semi-improved grassland were recorded. In addition the requested Hampshire Biological Records dataset showed that there were some plants identified near to the site that are Nationally Scarce or IUCN red list species, including the green-winged orchid (*Orchis morio*), Autumn ladies tresses (*Spiranthes spiralis*), Corn Spurrey (*Spergula arvensis*) and Wild clary (*Salvia verbenaca*).

It was therefore recommended that a NVC survey was undertaken around late June/early July, when most plants are visible to assess the botanical value of the site and establish if any protected plants or plants of conservation concern are present. In addition, this assessment would help to inform appropriate management for areas of grassland habitat that are to be retained through the development.

Survey Methods

National Vegetation Classification (NVC) survey

A detailed survey of the grassland was undertaken on 1st June and 2nd July 2015 to ascertain the National Vegetation Classification criteria (Rodwell, 1992)¹ to which the existing habitat would conform. The survey technique followed guidelines set out in the National Vegetation Classification Users' handbook (Rodwell, 2006)².

The survey was conducted using 12 plots throughout the specified grassland (6 in the area proposed for an access track and 6 in an area to be retained as green space). The location of survey area and plots are shown in Figures 1 and 2. The methodology was conducted as follows: 1m x 1m quadrats were used. Within each quadrat species presence and abundance was recorded for each species. Abundance values were recorded using the DOMIN scale as follows: 1: rare, 2: sparse, 3: frequent (but all less than 4%), 4: 4-10%, 5: 11-25%, 6: 26-33%, 7: 34-50%, 8: 51-75%, 9: 76-90%, 10: 91-100%.

The data were entered into excel spreadsheets (Appendix 1). The appropriate NVC community classifications was then assigned to the grassland surveyed using Volume 3 of British Plant communities (Rodwell, 1992).

¹ Rodwell, J.S. 1992. British Plant Communities: Volume 3. Grassland and montane Communities. Cambridge.

² Rodwell, J.S. 2006. National Vegetation Classification Users Handbook. JNCC.



Figure 1 – Location of survey area off Barton's Road, Havant.



Figure 2 – Location and numbers of survey plots (Purple). Location of common spotted orchid and common centuary shown by red circle.

Results and recommendations

The sward type that is represented by the assemblages found in plots 1 – 12 displays most similarities with the mesotrophic rank grassland NVC community MG1 which is characteristic of neglected agricultural habitats such as badly managed pastures and meadows. Yorkshire fog (*Holcus lanatus*) is constant in this community although it lacks False oat-grass (*Arrhenatherum elatius*), which is also typical of this habitat. The presence of red fescue (*Festuca rubra*), cocksfoot (*Dactylis glomerata*), hogweed (*Heracleum sphondylium*) and creeping thistle (*Cirsium arvense*) is also characteristic of this community. At the height of the growing season (June) the vegetation often becomes choked with legumes (as shown in Photo 1) and cleavers (*Galium aparine*) and (*Rubus fruticosus*) are present. This community occurs widely throughout lowland Britain.

Several of the species recorded are archaeophytes (literally 'ancient plants') which were introduced to the UK before 1500 AD. These include hairy tare (*Vicia hirsute*) and cut-leaved crane's-bill (*Geranium dissectum*).

A few individuals of common spotted orchid (*Dactylorhiza fuchsia*) and common centuary (*Centaureum erythraea*) were observed in the southwestern section of the site where the dominance of grasses and encroaching scrub is lower (See Figure 1). This is just outside the area where the road is proposed.

The southern third of the site displays species characteristic of poorly drained soils such as occasional yellow flag iris (*Iris pseudacorus*), pendulous sedge (*Carex pendula*) and common sedge (*Carex nigra*).

There are some denser patches of nettle (*Urtica dioica*) and creeping thistle (*Cirsium arvense*) (OV25 *Urtica dioica*-*Cirsium arvense* community) around the edges of the site. Abundant creeping thistle is typical of ill-managed or neglected land. Bramble has also started to take hold along with the grass Yorkshire fog (which is dominant) and species such as hogweed (*Heracleum sphondylium*) and lesser burdock (*Arctium minus*) have moved in. This community is moving towards the NVC W24 (*Rubus fruticosus* agg. – *Holcus lanatus* underscrub). The invasive butterfly bush *Buddleja davidii* is also present in low numbers. In time saplings from the bordering woodland will start to encroach if the habitat is not cut back.

No nationally Scarce or IUCN red list species were recorded during the survey, although bluebell (*Hyacinthoides non-scripta*) was identified outside of the sampled area along a hedgerow bordering Bartons Road. Bluebells are scheduled under Section 8 of the Wildlife and countryside Act, which protects them from picking and sale, including the uproot and destruction of the plant.

In summary, the existing grassland is of relatively low conservation value, however, the presence of species such as vetches and clovers (*Trifolium spp.*) are highly beneficial for pollinating insects, (Photo 1). It is recommended that the existing grassland is managed in order to retain, and ideally enhance, existing floral diversity in the local area. This will involve annual cutting to ensure that the coverage of scrub species such as Common Nettle, Creeping Thistle and Bramble are reduced in the sward.

Some mitigation may be required to translocate bluebells around the section of the hedge bank that will be affected by the road access for the development, with plants translocated where necessary.



Photo 1 – Grassland Sward dominated by Grass Vetchling in past arable land at Bartons Road, Havant.

Appendix 1 – NVC Survey Plot Data

<i>Plot Number</i>	<i>Species</i>	<i>Domin Scale</i>
1	<i>Dactylis glomerata</i>	6
1	<i>Festuca rubra</i>	5
1	<i>Holcus lanatus</i>	5
1	<i>Heracleum sphondylium</i>	4
1	<i>Cirsium arvense</i>	3
1	<i>Veronica chamaedrys</i>	3
1	<i>Vicia hirsuta</i>	3
1	<i>Vicia sativa</i>	3
1	<i>Geranium dissectum</i>	2
1	<i>Lotus corniculatus</i>	2
1	<i>Rubus fruticosus</i>	2
1	<i>Rumex crispus</i>	2
1	<i>Senecio squalidus</i>	2
1	<i>Urtica dioica</i>	2
1	<i>Arctium minus</i>	1
1	<i>Galium aparine</i>	1
1	<i>Taraxacum agg</i>	1
2	<i>Lathyrus nissolia</i>	7
2	<i>Anisantha sterilis</i>	4
2	<i>Cirsium arvense</i>	4
2	<i>Festuca rubra</i>	4
2	<i>Bromus hordeaceus</i>	3
2	<i>Geranium dissectum</i>	3
2	<i>Holcus lanatus</i>	3
2	<i>Lotus corniculatus</i>	3
2	<i>Rubus fruticosus</i>	3
2	<i>Myosotis arvensis</i>	2
2	<i>Pulicaria dysenterica</i>	2
2	<i>Rumex crispus</i>	1
3	<i>Holcus lanatus</i>	8
3	<i>Urtica dioica</i>	5
3	<i>Cirsium arvense</i>	4
3	<i>Anisantha sterilis</i>	3
3	<i>Festuca rubra</i>	3
3	<i>Lotus corniculatus</i>	2
3	<i>Pulicaria dysenterica</i>	2
3	<i>Vicia sativa</i>	2
3	<i>Lathyrus nissolia</i>	2
3	<i>Geranium dissectum</i>	2
3	<i>Hypochaeris radicata</i>	1
3	<i>Rubus fruticosus</i>	1
3	<i>Taraxacum agg</i>	1
4	<i>Lathyrus nissolia</i>	7

4	<i>Holcus lanatus</i>	7
4	<i>Bromus hordeaceus</i>	5
4	<i>Bromopsis erecta</i>	4
4	<i>Rubus fruticosus</i>	3
4	<i>Cirsium arvense</i>	3
4	<i>Festuca rubra</i>	3
4	<i>Rumex crispus</i>	2
4	<i>Geum urbanum</i>	2
4	<i>Hypochaeris radicata</i>	2
4	<i>Senecio squalidus</i>	1
4	<i>Angelica sylvestris</i>	1
4	<i>Buddleja davidii</i>	1
4	<i>Vicia hirsuta</i>	1
5	<i>Trifolium repens</i>	7
5	<i>Holcus lanatus</i>	7
5	<i>Lathyrus nissolia</i>	7
5	<i>Rubus fruticosus</i>	5
5	<i>Rumex crispus</i>	4
5	<i>Festuca rubra</i>	3
5	<i>Ranunculus repens</i>	2
5	<i>Veronica chamaedrys</i>	2
5	<i>Vicia sativa</i>	2
5	<i>Bromus hordeaceus</i>	1
5	<i>Hypericum perforatum</i>	1
5	<i>Pulicaria dysenterica</i>	1
6	<i>Bromopsis erecta</i>	6
6	<i>Rumex crispus</i>	5
6	<i>Lathyrus nissolia</i>	5
6	<i>Festuca rubra</i>	5
6	<i>Pulicaria dysenterica</i>	4
6	<i>Juncus conglomeratus</i>	2
6	<i>Rubus fruticosus</i>	2
6	<i>Trifolium repens</i>	2
6	<i>Senecio squalidus</i>	2
6	<i>Bromus hordeaceus</i>	2
6	<i>Geranium dissectum</i>	2
6	<i>Angelica sylvestris</i>	1
7	<i>Holcus lanatus</i>	8
7	<i>Lotus corniculatus</i>	5
7	<i>Pulicaria dysenterica</i>	4
7	<i>Festuca rubra</i>	4
7	<i>Geranium dissectum</i>	3
7	<i>Vicia sativa</i>	2
7	<i>Juncus conglomeratus</i>	2
7	<i>Rubus fruticosus</i>	2
7	<i>Rumex crispus</i>	2
7	<i>Vicia hirsuta</i>	2
8	<i>Holcus lanatus</i>	8

8	<i>Rubus fruticosus</i>	4
8	<i>Festuca rubra</i>	4
8	<i>Rumex crispus</i>	3
8	<i>Cerastium fontanum</i>	3
8	<i>Vicia sativa</i>	2
8	<i>Vicia hirsuta</i>	2
8	<i>Juncus conglomeratus</i>	2
8	<i>Hedera helix</i>	2
8	<i>Senecio squalidus</i>	2
8	<i>Carex pendula</i>	1
9	<i>Carex pendula</i>	7
9	<i>Holcus lanatus</i>	6
9	<i>Vicia hirsuta</i>	5
9	<i>Bromopsis erecta</i>	5
9	<i>Geranium dissectum</i>	3
9	<i>Hypochaeris radicata</i>	2
9	<i>Lapsana communis</i>	1
9	<i>Rubus fruticosus</i>	3
9	<i>Cirsium vulgare</i>	1
9	<i>Salix caprea</i>	1
10	<i>Potentilla reptans</i>	8
10	<i>Festuca rubra</i>	6
10	<i>Holcus lanatus</i>	6
10	<i>Bromopsis erecta</i>	5
10	<i>Anisantha sterilis</i>	3
10	<i>Vicia hirsuta</i>	2
10	<i>Rubus fruticosus</i>	2
10	<i>Rumex crispus</i>	2
10	<i>Lathyrus nissolia</i>	1
11	<i>Rubus fruticosus</i>	7
11	<i>Vicia hirsuta</i>	2
11	<i>Senecio squalidus</i>	4
11	<i>Holcus lanatus</i>	5
11	<i>Geranium dissectum</i>	1
11	<i>Festuca rubra</i>	5
11	<i>Cirsium arvense</i>	5
11	<i>Bromopsis erecta</i>	5
12	<i>Lathyrus nissolia</i>	7
12	<i>Vicia hirsuta</i>	5
12	<i>Rumex crispus</i>	4
12	<i>Festuca rubra</i>	4
12	<i>Taraxacum agg</i>	3
12	<i>Geranium dissectum</i>	2
12	<i>Lapsana communis</i>	2
12	<i>Cirsium arvense</i>	2
12	<i>Rubus fruticosus</i>	2
12	<i>Trifolium repens</i>	2
12	<i>Holcus lanatus</i>	2

Additional species outside quadrats

Agrimonia eupatoria

Carex nigra

Centaurium erythraea

Dactylorhiza fuchsii

Iris pseudacorus

Trifolium campestre

Hyacinthoides non-scripta